09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 1 of 42

.



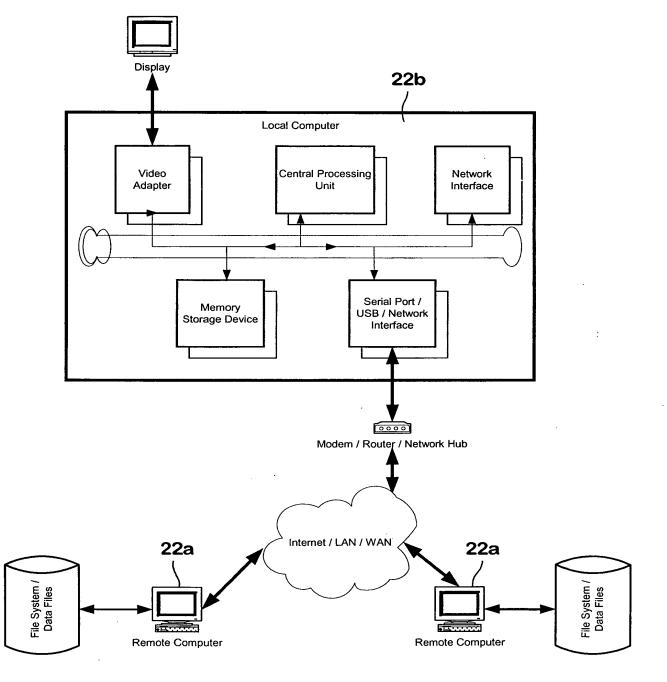


FIG. 1

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 2 of 42

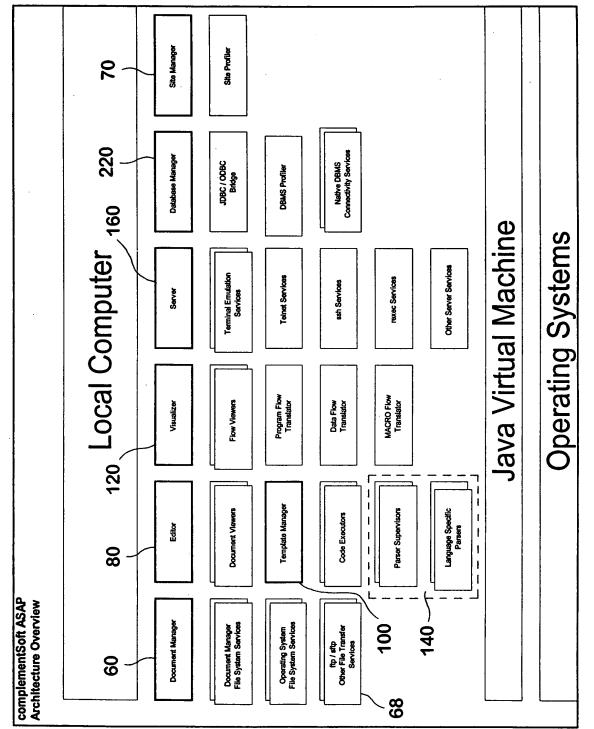
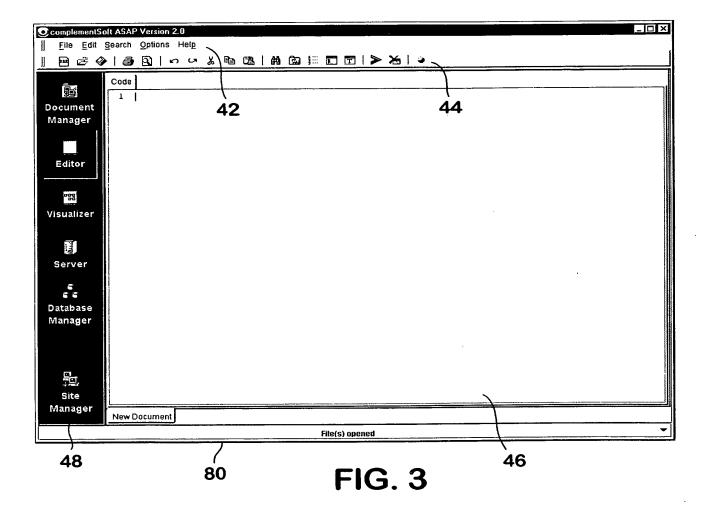


FIG. 2

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 3 of 42

J



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 4 of 42

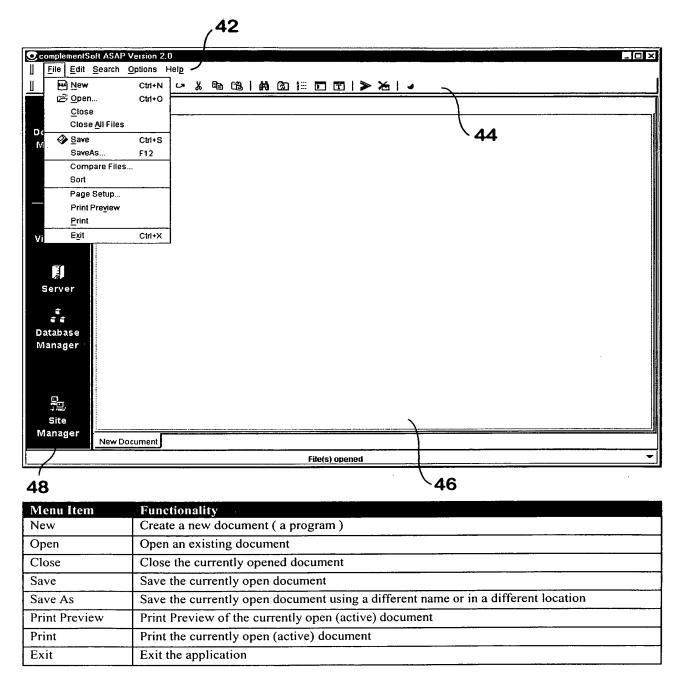


FIG. 4a

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 5 of 42

.

		42			
<u> </u>	ntSoft ASAP Version 2. Jit <u>S</u> earch <u>O</u> ptions	Help /			
	undo Ctrl+Z Redo Ctrl+Shift+Z			<u>}</u>	·····
	Label Copy Ctrl+X Copy Ctrl+C		· · · · · · · · · · · · · · · · · · ·		····
Manag	Paste Ctrl+V			44	
Editor 					
Visualizei	r				
) Server					
Database Manager					
Site					
Manager	New Document				
<u> </u>	· · ·		File(s) opened	}	•
48				46	

Menu Item	Functionality	
Undo		
Redo		
Cut		
Сору		
Paste		

•

.

FIG. 4b

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 6 of 42

			42	
C complementS	oft ASAP Version 2.0	D		
∬ <u>F</u> ile <u>E</u> dit				
▯▣ਫ਼∢	🛱 <u>F</u> ind	Ctrl+F	℡©& A@2 ﷺ █ █ > ≻+ → 、	
	<u>R</u> eplace	Ctrl+R		
	F <u>i</u> nd Next R <u>e</u> place Next	F3 F4		
Document	Go to Line	Ctrl+G	44	
Manager		0		
Editor				
Editor				
2000				
Visualizer				
at an at a second s				
Server				
с. сс				
E E Database				
Manager				
Site			\mathbf{i}	
Manager	New Document			
7	u <u></u>		File(s) opened	•
48			~46	

48

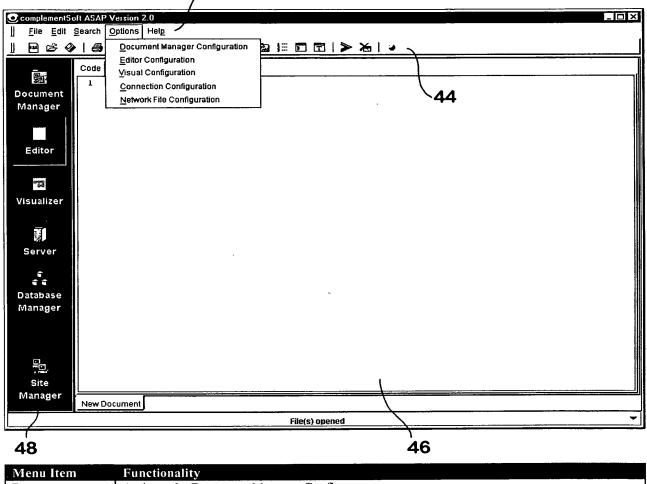
Menu Item	Functionality
Find	
Replace	
Find Next	
Replace Next	
Goto Line	Go to the n line in the currently active document

FIG. 4c

·

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 7 of 42





. Menu Item	Functionality
Document	Activate the Document Manager Configurator
Manager	
Configuration	
Editor	Activate the Editor Configurator
Configuration	
Visual	Activate the Visual Configurator
Configuration	
Connection	Activate the Connection Configurator
Configuration	
Network File	Activate the Network File Configurator
Configuration	

FIG. 4d

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 8 of 42

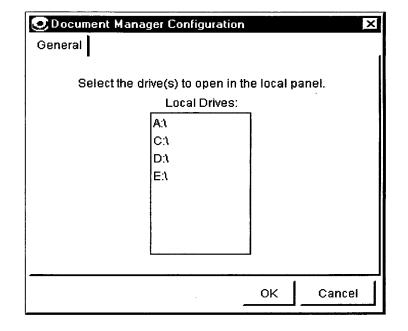


FIG. 4da

.

· .

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 9 of 42

•

Editor Configuration General Fonts Color Execute 84a 84b 84c 84a	
Use external Editor External Editor:	84
Print header information (Date File name Page number)	(
Print line numbers	
Print wrapped text	
Reset OK Cancel	

FIG. 4db

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 10 of 42

OSite Manac	ger Configuration	×
Connection		
	 No proxies Firewall with no proxies Use proxies No network detection 	
	SOCKS proxy	
-SOCKS Pi Server Name	Server 1080 Port	-
ে Ver 4 ি Ver 5	User Name: Authentication Password:	-
Test	OK Cancel A	\pply

FIG. 4dc

.

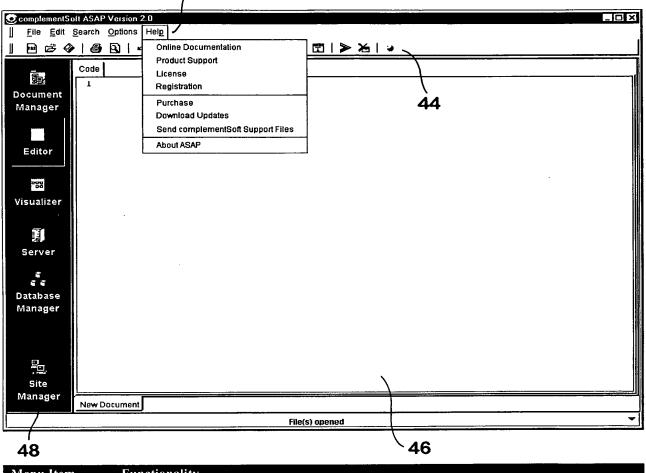
09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 11 of 42

ONetwork File Configuration		
	i	
Enable Network File location for Site Manager		
Path:	·	
🗖 Enable Network File location for Message Manager		
Path:]	
Precedence: 📀 Local file 🥤 Network file		
Enable Network File location for Templates		
Path:	- 	
OK Cancel		

FIG. 4dd

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 12 of 42





Menu Item	Functionality
On-line	Show On-line Documentation
Documentation	
Product Support	Displays the Product Support Page with e-mail address, How to and Frequently Asked Ouestions
License	Detailed license information with the ability to renew and/or upgrade the license
Registration	Perform on-line product registration
Purchase	Displays the complementSoft e-store
Download	Retrieve Product Updates
Updates	
Send	E-mail support files to complementSoft
complementsoft	
Support files	
About ASAP	Version and copyright information

FIG. 4e

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 13 of 42

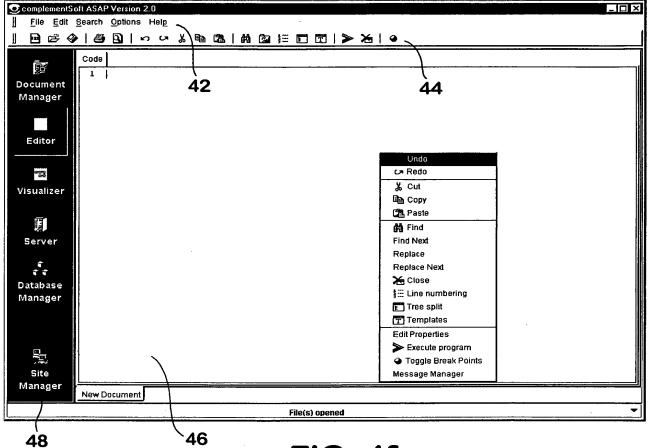


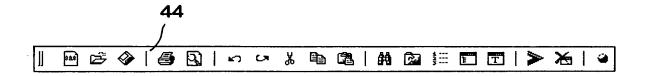
FIG. 4f

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 14 of 42

Menu Item	Functionality
Undo	
Redo	
Cut	
Сору	
Paste	
Find	
Find Next	
Replace	
Replace Next	· · · · · · · · · · · · · · · · · · ·
Close	Close the currently active document
Line numbering	Turn line numbering on of off
Tree Split	Activate the Tree View split screen mode
Template Manager	Activate the Template Manager
Edit Properties	Edit the properties (timestamp, originating location, etc.) of the document
Execute Program	Execute the currently active program (i.e., the one that the user is currently editing)
	The user can further specify the execution mode (i.e., how to execute, with which option turn on/off, etc) and execution location (i.e., where to execute, which server, which execution engine, which location)
	If the user has previously activated Break-Point execution (see below), then the execution will be carried out based out the break-points, i.e., start at where the user indicate that it should start, end at where the user indicate that it should end and skipping statements as indicated by the user.
Toggle Break	Activate / deactivate Break-Point execution.
Points	Setup Break-Points if they have not been previously setup.
Message	Reset/Remove Break-Points if they have been previously setup Activate the Message Manager to add, remove, or update the messages in the message
Manager	repository

FIG. 4f (continued)

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 15 of 42

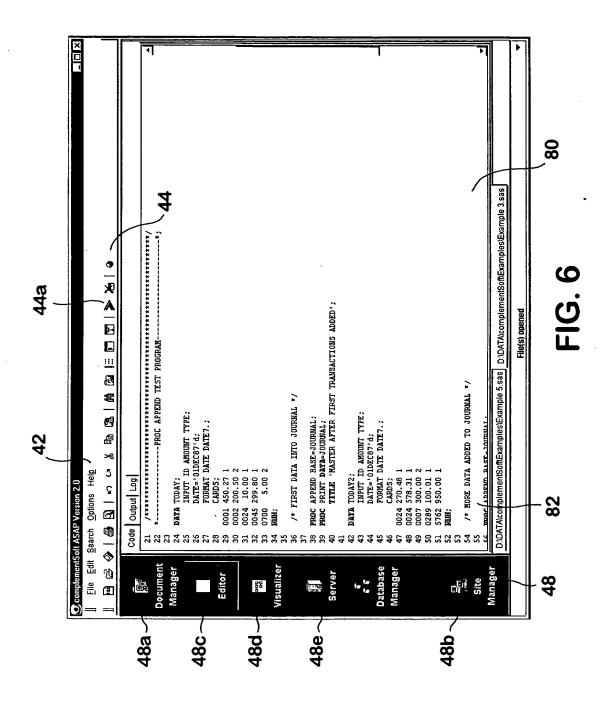


-

Menu Item	Functionality
New	
Open	
Save	
Print	
Print Preview	
Undo	
Redo	
Cut	
Сору	
Paste	
Find	Find a word
Refresh	Refresh the Editor display
Toggle Line Numbers	Show or hide line numbers
Toggle Tree View	Enable or disable Tree View
Template Manager	Activate the Template manager
Execute Program	Execute the currently active program
Close	Close the currently active program
Toggle Break Point Execution	Enable of disable Break Point Execution

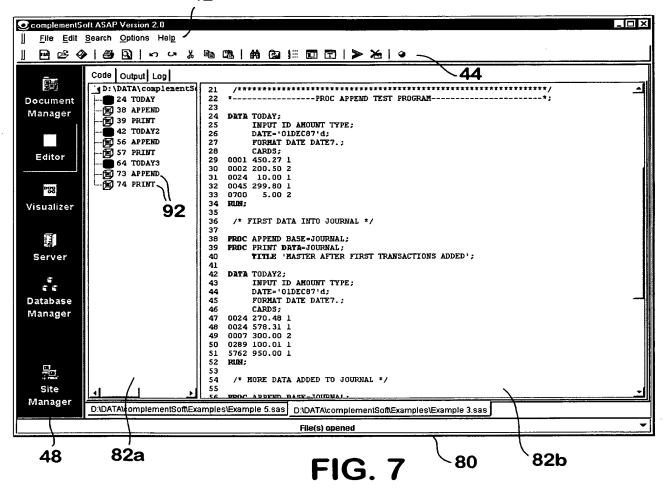
FIG. 5

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 16 of 42

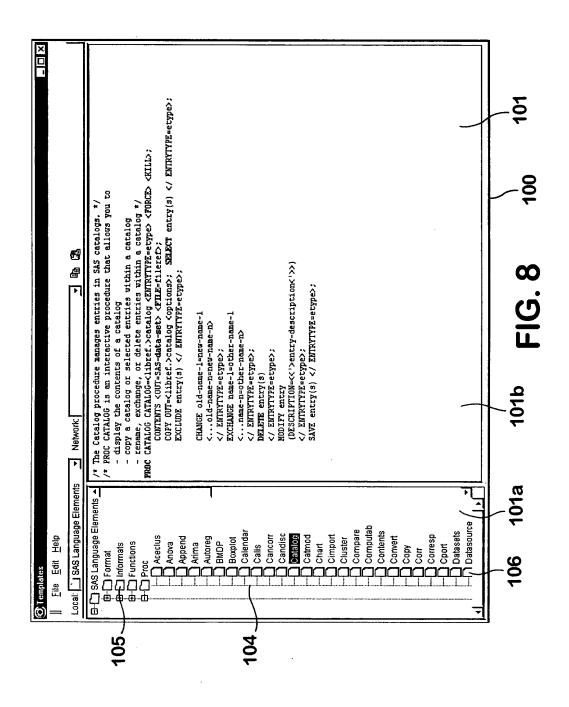


09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 17 of 42

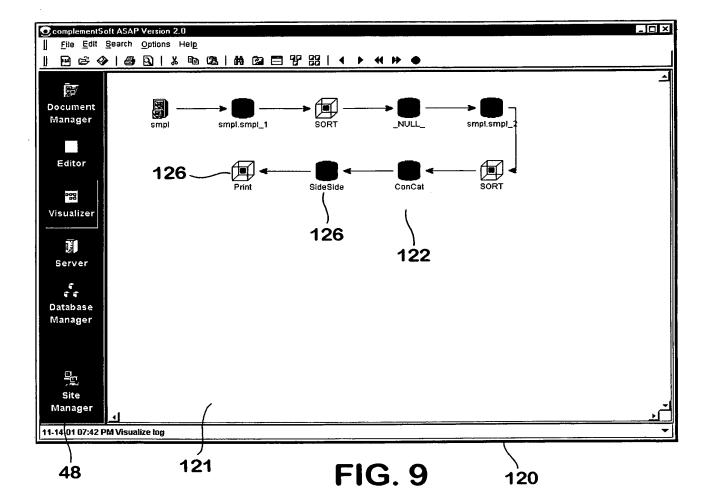
42



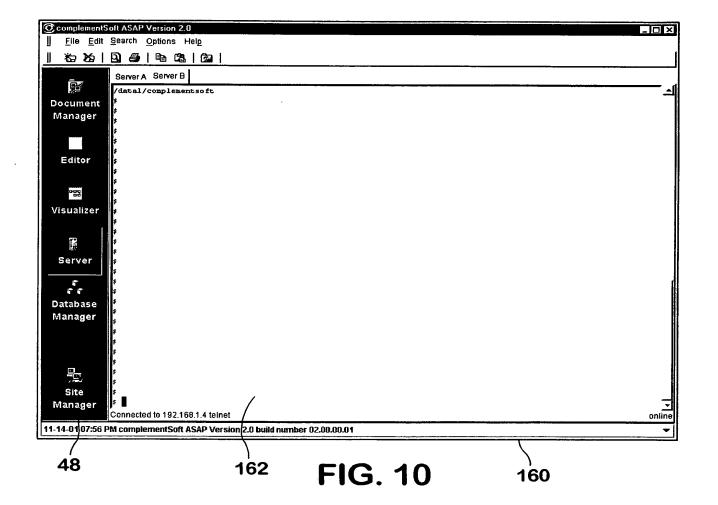
09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 18 of 42



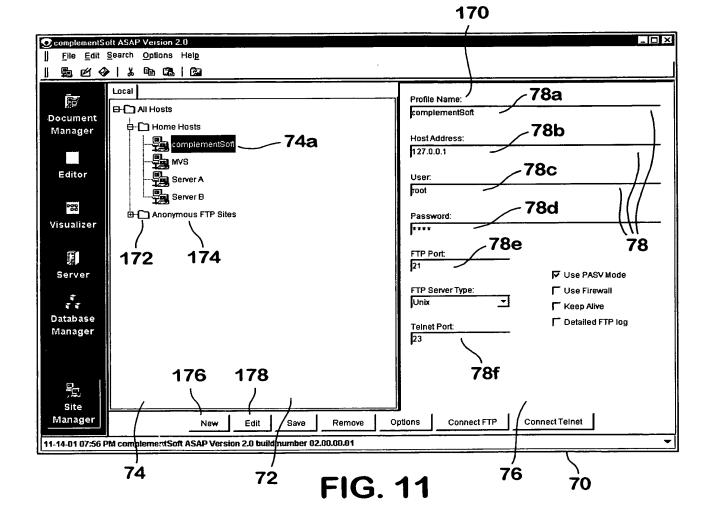
09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 19 of 42



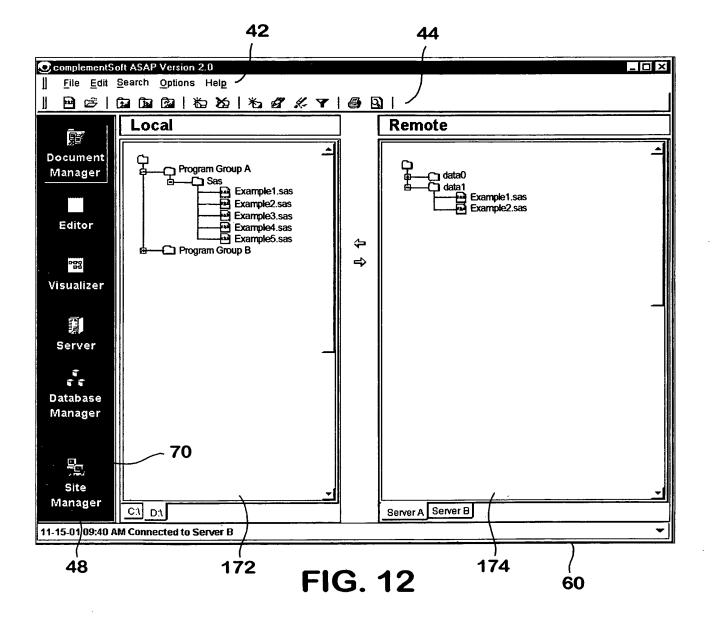
09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 20 of 42



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 21 of 42



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 22 of 42



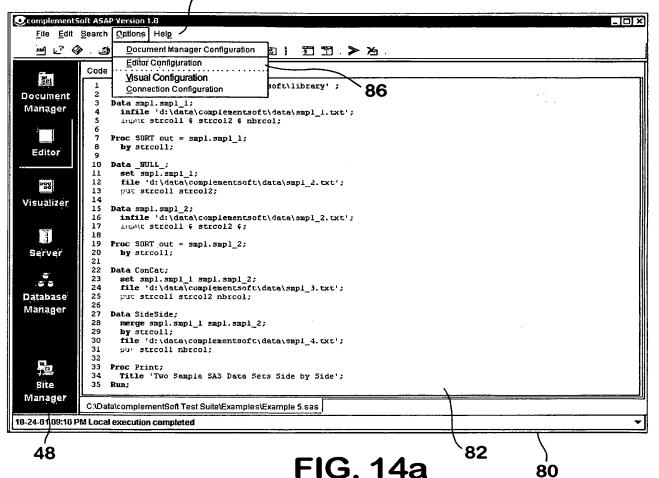
09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 23 of 42

€ Search	×
Look in: complementSoft Program File	es 🔽 🔽 🖻 🗈 🛗 🧱
jre UninstallerData ASAP_70-01-01u.exe ASAP_Update_InstallLog.xml complementsas.jar ComplementSoft ASAP.exe ComplementSoft ASAP.ico ComplementSoft ASAP.lax ComplementSoft_ASAP_InstallLog.xml ComplementSoft_SAS.exe crimson.jar	► Find Name Date Contert Found contains ▼ ignore case
ban jaxp.jar Ban JGo.jar	Start Stop
File <u>n</u> ame:	Search
Files of type: All Files (*.*)	Cancel
^{69a} Fl	G. 13 ⁶⁹

.

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 24 of 42

,42



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 25 of 42

1

84a	84	c 8	34d				
General	Fonts Color 84b			Program File	_		X
	/* SON * SON PROC APPEND PROC PRINT E TITLE " TITLE2 DATA TODAY2;	e sample BASE=JOU PATA=JOUF SAS Samp '(VALUES	IRNAL; WAL; ble prog	;	Image: second	Image: Constraint of the second se	4
Reset	t					ок	Cancel
			FI	G. 14	b ⁸	\ 34	

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 26 of 42

C Editor Configuration		 ×
General Fonts Color Execute 84a 84b 84c 84d		
Use external Editor External Editor: 110		
Print line numbers Print wrapped text		
Reset	ок	Cancel

FIG. 14c

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 27 of 42

. .

04-

04a	840
CE clitor Configuration	ion
General Fonts C	
84	ь 84c
□ N Observation	o Observations 0
Expand Macro	(MPRINT)
Execution Location	
🗖 Local	Execution Path rogram Files\SAS Institute\SAS\V8\SAS.exe
🗹 Remote	
	Don't show option dialog before execution.
Reset	OK Cancel

FIG. 14d

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 28 of 42

-

Genera	al Fonts Color Execute
F	Font Name: Courier New 💌 Size: 12 💌 Style: Plain 💌
Previe	ew
1	/* some sample code */
	*:
	PROC APPEND BASE=JOURNAL;
4	PROC PRINT DATA=JOURNAL;
5	TITLE "SAS Sample program";
6	TITLE2 '(VALUES SHOULD BE CORRECT, HOWEVER);
7	
8	DATA TODAY2;
9	INPUT ID AMOUNT TYPE;
	DATE='01DEC87'd;
	FORMAT DATE DATE7.;
	CARDS;
	0024 270.48 1
1	0024 578.31 1 0007 300.00 2
	0007 300.00 2 0289 100.01 1
18	5762 950.00 1
19	3702 330:00 1
	IF VPT_MER > 0 THEN
21	VPC_MER = VHA_MER / VPT_MER * 100;

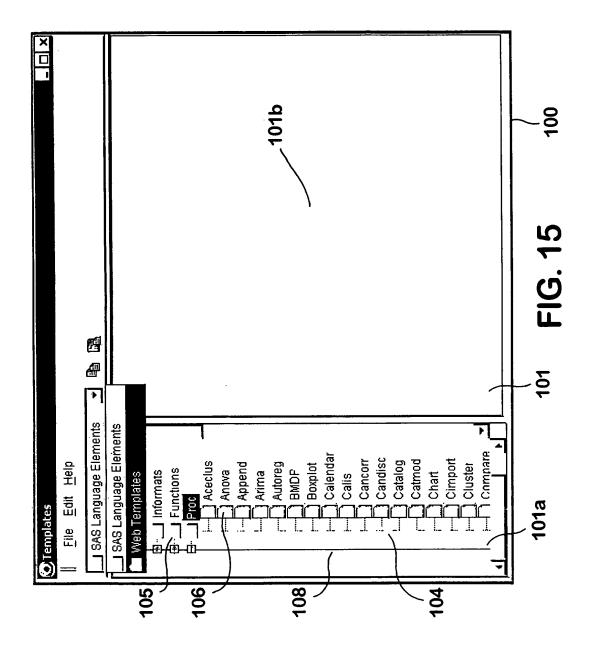
FIG. 14e

.

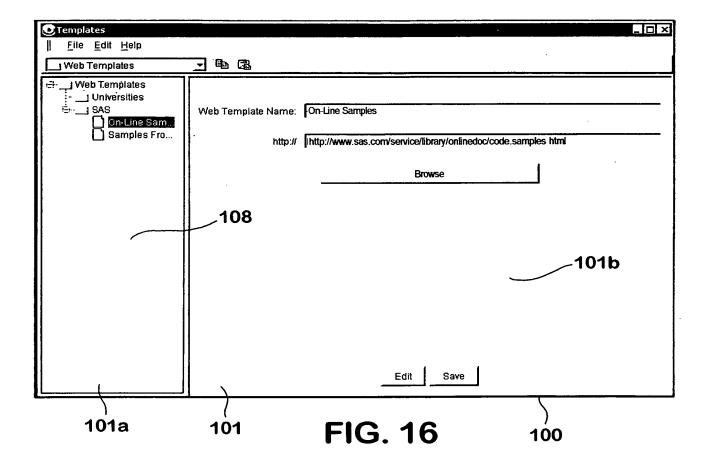
۰

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 29 of 42

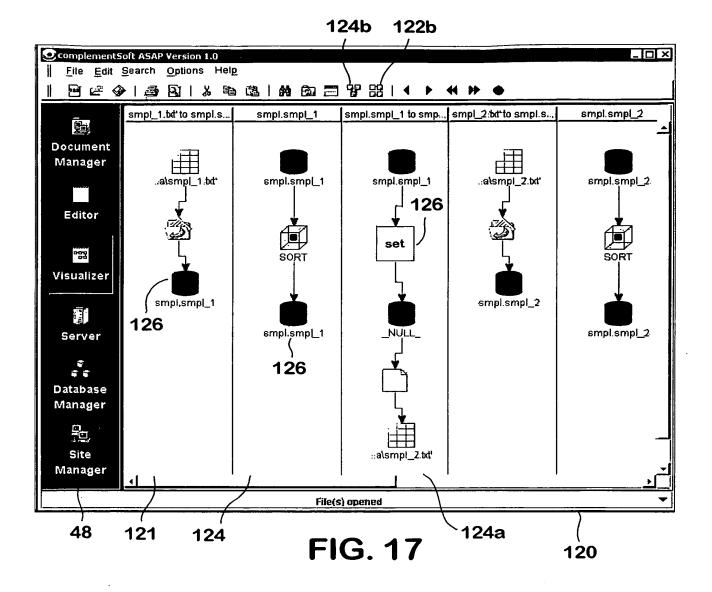
-



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 30 of 42



U9/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 31 of 42



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 32 of 42

- - --

122b

124b

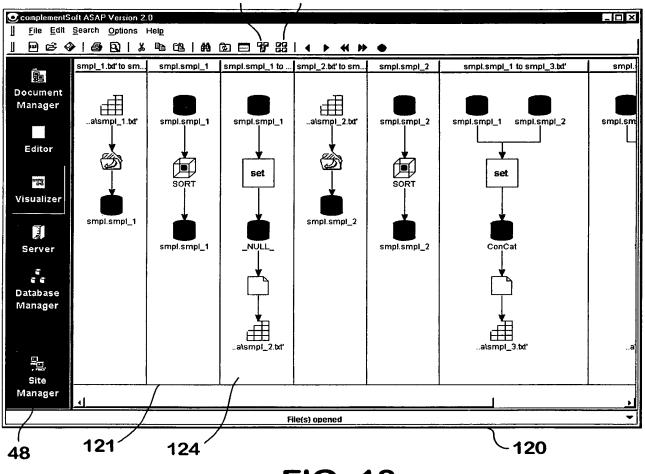
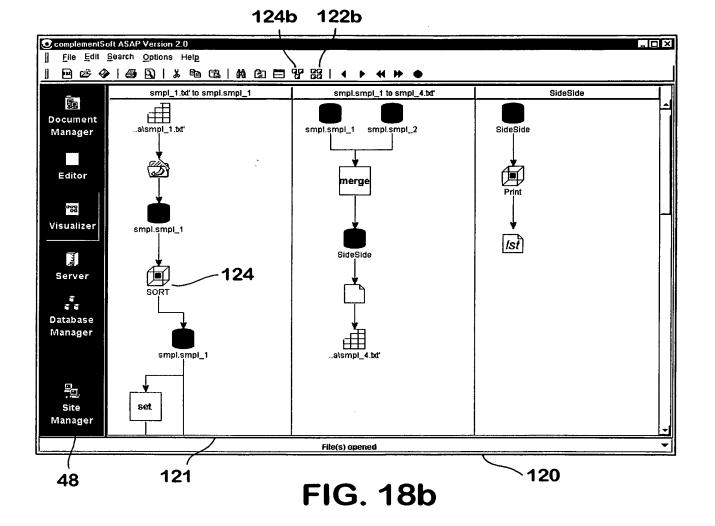


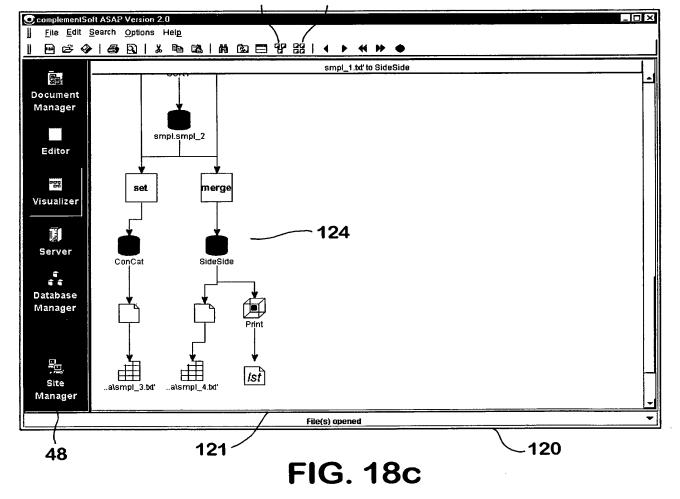
FIG. 18a

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 33 of 42

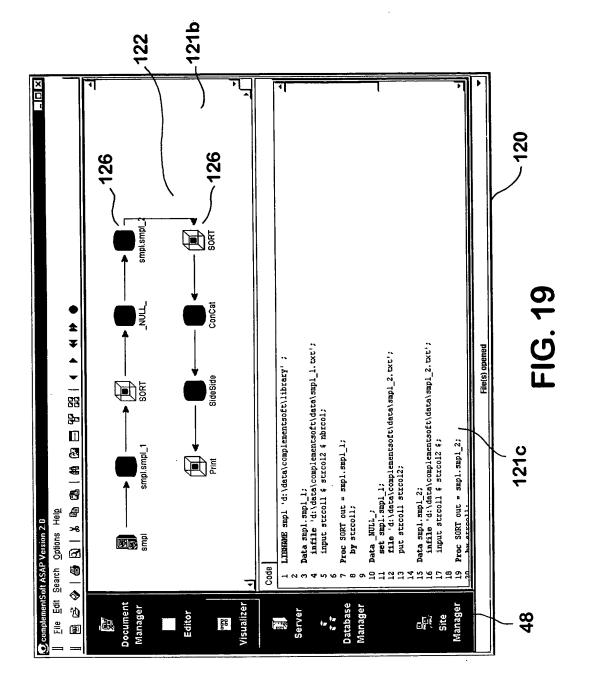


SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 34 of 42

124b 122a

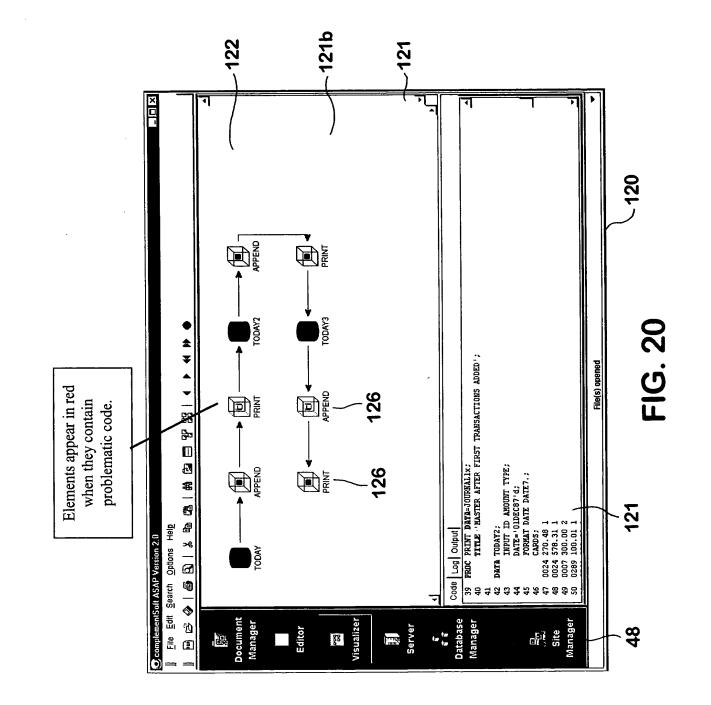


09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 35 of 42



.

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 36 of 42



U3/332,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 37 of 42

💽 Code & Log	
39 PROC PRINT DATA=JOURNAL1x;	
40 TITLE 'MASTER AFTER FIRST TRANSACTIONS ADDED';	
41	
42 DATA TODAY2;	1
43 INPUT ID AMOUNT TYPE;	}
44 DATE='01DEC87'd;	
45 FORMAT DATE DATE7.;	
46 CARDS;	
47 0024 270.48 1	
48 0024 578.31 1	
38 PROC APPEND BASE=JOURNAL;	
NOTE: Appending WORK.TODAY to WORK.JOURNAL.	
NOTE: BASE data set does not exist. DATA file is being copied to BASE file	_
	Friday,
NOTE: There were 5 observations read from the dataset WORK.TODAY.	
NOTE: The data set WORK.JOURNAL has 5 observations and 4 variables.	
NOTE: PROCEDURE APPEND used:	
real time 2.14 seconds	ĺ
39 PROC PRINT DATA=JOURNALLx;	
ERROR: File WORK.JOURNALIX.DATA does not exist.	
<pre></pre>	▶

FIG. 20a

.

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 38 of 42

٢	Debu	gging l	Hints		×
ER	ROR:	File	* * * *	does	3 not exist.
	<u>.</u>	· ··· ··· ··			
Su	ggest	ed Ac	tion:		
1)	Make	e sure	that	the	dataset name is spelled correctly
2)	Make	e sure	that	the	libref is spelled correctly
3)	Call	. Sama	ntha		
					Edit OK Cancel

FIG. 20b

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 39 of 42

.

1

🕅 Message Manager 🛛 🔍
Messages List:
ERROR: File *.*.* does not exist.
Error Message:
ERROR: File *.*.* does not exist.
Hint
1) Make sure that the dataset name is spelled correctly
2) Make sure that the libref is spelled correctly
3) Call Samantha 🔤
Apply OK Delete Cancel
·

FIG. 20c

US/SSZ.024 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 40 of 42

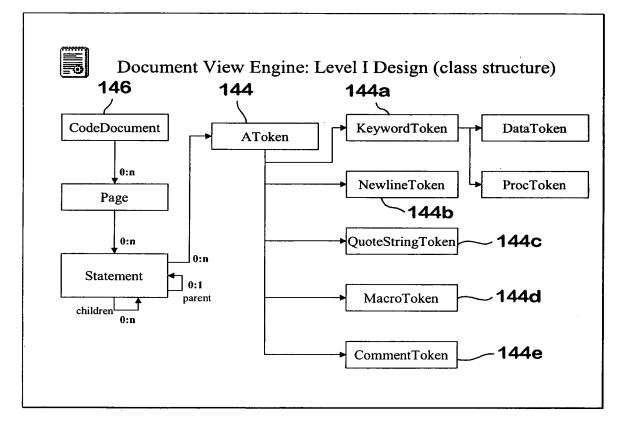
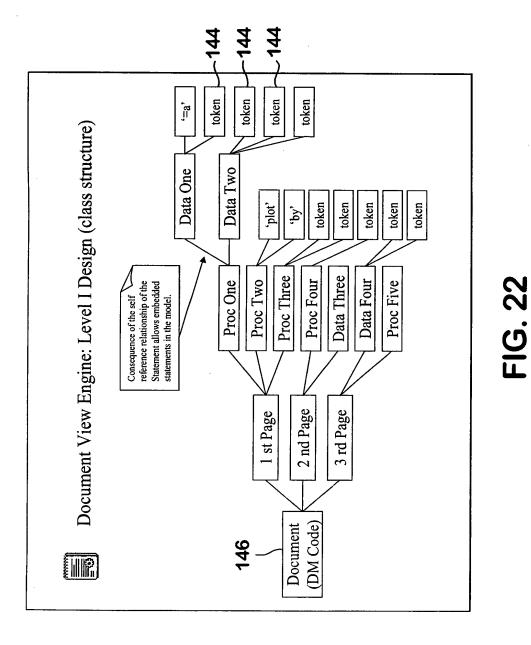
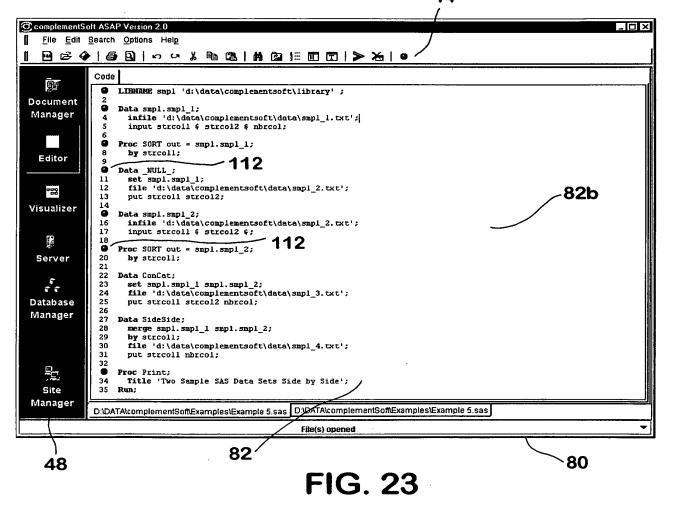


FIG. 21

09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 41 of 42



09/992,624 SYSTEM AND METHOD FOR GENERATING AND MAINTAINING SOFTWARE CODE 42 of 42



44